

ABSTRACT

An R-T-B system permanent magnet 1 comprises a magnet body 2 comprising a sintered body comprising at least a main phase comprising $R_2T_{14}B$ grains (wherein R represents one or more rare earth elements, and T represents one or more transition metal elements including Fe or Fe and Co essentially) and a grain boundary phase containing R in a larger amount than the main phase, the magnet body 2 having a 300 μm or less thick (not inclusive of zero thick) hydrogen-rich layer 21 having a hydrogen concentration of 300 ppm or more formed in the surface layer portion, and an overcoat 3 covering the surface of the magnet body 2 can improve the corrosion resistance of the R-T-B system permanent magnet 1 with an overcoat 3 formed thereon without degrading the magnetic properties thereof. The present invention can be applied to formation of the overcoat 3 by electrolytic plating, can fully ensure the corrosion resistance as a primary target of the overcoat 3 formation without substantially degrading the production efficiency, and can provide the R-T-B system permanent magnet 1 with a high dimensional precision by suppressing the partial collapse (detachment of grains) of the surface thereof.